

# THE AMERICAN ART STUDENT

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57 MURRAY STREET, NEW YORK, N. Y.





MURAY

BY NICHOLAS MURAY

From "APPLIED ART" (See Page 18)



# THE AMERICAN ART STUDENT

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VOL. III

JULY, 1921

No. 4

## MATERIALS THE ARTIST USES

By HERBERT E. MARTINI

There are besides the earth colors enumerated last month many other natural pigments. By natural we mean mineral deposits, colored clays and ores which need no chemical manipulation to prepare them for use; washing, grinding and floating being sufficient.

The yellows, chiefly ochres, which we today would consider too brown for yellow, are augmented by a brighter color—orpiment. It is the yellow sulphide of arsenic. This pigment in spite of its poor history as a permanent color has been used again and again—even as recently as the eighteenth century we find so discriminating an artist as Reynolds fascinated by its tone to the detriment of some of his best work. The early artisans restricted its use greatly when they discovered through experience its treacherous nature but once they felt the charm of this new color they could not do without it. It should be discarded once and for all. The reason for this abandonment lies in the fact that it is a very unstable compound undergoing reduction with copper and lead colors. The sulphides it forms with these colors are blackish compounds.

The next most important pigment was cinnabar, the natural sulphide of mercury. This corresponds to vermilion, the artificial sulphide of mercury. Let me state here that the use of *natural* and *artificial* is in no sense a criterion for quality or beauty as it would be applied for instance to flowers. It is often the case that in the artificial colors a better product is obtained for the reason that the materials from which they are synthesized are purer than those nature had to deal with. For instance cadmium yellow, the sulphide of the metal cadmium, is found in nature but the tone is never as clear as that produced by chemical means for there are many impurities in it due to the metals usually found

with cadmium forming dull colored sulphides. If a solution of a cadmium salt known to be free from deleterious substances is precipitated an absolutely pure cadmium sulphide of exquisite tone is produced.

Another advance attributable to the Greek and Roman classical period, was made through the discovery that lead corroded by vinegar in the presence of carbon dioxide, evolved by the fermentation of humus, produced a white. This is the white that is commonly called lead white and is a carbonate of the metal. It seems the poisonous nature of lead compounds, however, was not realized for Pliny described this powder being used by the Roman women for their faces.

The copper compounds azurite and malachite still served this period for blue and green pigments. The Egyptian blue, the glaze owing its color to cobalt, was also still in use. It is surprising to many that lapis lazuli was not used for blue. This semi-precious stone was known but it remained for the medieval craftsman to crush it and obtain the rich, deep blue which we know as ultramarine.

The white colors of the period were the various natural chalks used by the Egyptians and the lead white mentioned above. The former were used mostly in fresco painting as the latter is attacked by lime. This reaction is due to the insufficiently slaked lime. Lead can not be used in the fresco technique for the unslaked lime destroys it. For this reason only the chalks were used for this medium.

Charcoal prepared from vine stalks and the charred bones of animals were the blacks used.

There is the possibility that the process of making white lead likewise led to making minium or red lead. The corrosion of copper producing a brilliant green, popularly called verdisgris, brought about by the action of vinegar, was one of the achievements of the time.



One hears on all sides whether it be from student or artist the same general opinion that the older painters were not plagued by colors derived from coal-tar or as some say aniline. The fact is that they were as human as we were—a new color which was brighter to the eye for the moment found favor. We are more fortunate in some respects in that chemistry can tell us more about the permanency of a pigment in five minutes than five years of the action of time could tell the artist then. We find that common vegetable dyes were used in staining chalk and infusorial earth to make pigments for painting purposes. This naturally involved the knowledge of throwing these dyes down on the base or as it is called mordanting. The Pliny book mentions a substance which some identify as a related product to our alum used today for precipitating a dye on a base.

Weld, the wild mignonette, yielded a yellow lake which lost its color quite rapidly when exposed to sunlight. It could not be used at all in the fresco technique and this fact you will note as characteristic of all colors of this type.

Woad, a plant of the mustard family from whose leaves a blue dye was obtained, gave a lake of this color while a species of shellfish gave the Roman artisan murex—the brilliant purple, the mark of royalty.

A bright, crimson color that I might liken to carmine, was obtained from kermes. This is a small insect living on the prickly oak of the Mediterranean and forms tiny red berries all along the twigs. These were collected and boiled, the water assuming a crimson color. By means of evaporation the decanted liquid was concentrated and very deep red lakes were obtainable.

Of all these lakes, however, we must give that produced from the madder-root a better rating. It is the most permanent of those mentioned and is still considered so today. We probably do not get as much genuine root madder but a chemical product which is even superior from the alizarine series of coal-tar products. When pigments at the disposal of the modern artist are discussed reference to this color will be made in detail.

Pliny's Natural History describes most of the pigments I have enumerated but often it is not clear from the MSS. just what is meant. Conflicting translations exist because there are various hand copies differing greatly as regards spelling and punctuation. Most of our information would be mere conjecture then, were it not

for the searching, painstaking chemical analyses made by modern investigators.

It is imperative for us to consider further the encaustic painting because it is a method which has had many revivals even to the present day. Another thing of interest is to review in proportion to the space here the controversies concerning the preparation and use of both the wax and the painting implements.

The main bone of contention is whether the artists used the wax melted by heat or in liquid form cold. This latter would call for the consideration of a volatile and non-volatile solvents, the saponification of the wax by means of potash or soda or the emulsification of the wax using gum arabic, egg or casein as the agent.

The contention arises from the passage in Pliny which refers to the preparation of "Punic wax" mentioned in the last issue. One group of investigators holds that this wax was a peculiar preparation more like a soap and the *nitron* mentioned by Pliny is natron or soda. E. Berger in a very thorough investigation of this matter sustains this point by actual trials of mixtures according to the directions of the ancient MS. This wax soap can be made by dissolving 10 parts of potash in 250 parts of water. When this boils 100 parts of bleached beeswax in flakes (or finely scraped with a knife) are gradually added while the whole solution is continually stirred. When the wax is completely saponified and cooled it can be diluted with cold water. This soap is then used as a binding medium for the pigments. The solution of this in water is milky and therefore called by some, wax milk. The addition of a little linseed oil gives the mixture better painting quality.

If a mixture of this sort was used then what was the meaning of Pliny's direction that the painting was "burnt in" when it was completed? Should you try this wax soap you will find that the color is matt. But take a hot iron and pass it over the painting about an inch or so from the surface until the wax begins to sweat and the brush strokes flow together with an enamel-like surface and you will get a dull, sympathetic gloss which can be heightened by light friction with a soft cloth. Naturally this polishing process must not be attempted until the wax, ground and panel have become thoroughly cooled. A similar effect to that of the hot iron can be obtained by holding your picture over an evenly distributed source of heat from a stove.

I have dwelt on this saponified wax theory because the solution in volatile solvents was



improbable as these were not known. The emulsion of wax may have been used but to date no analysis has proved the existence of albuminous compounds in connection with the wax. The assumption of a wax-tempera, as such a mixture might well be called, is based on MSS. on medical practice of the times. In these an emulsion of wax and egg is described as used for application on the body. The ancient writer in recording this says "such as painters use".

In 1847 there was found in a tomb at St. Médard a complete outfit for painting in the encaustic method with the cauterium. It consists of bronze box used as a brazier, a mortar and pestle for pulverizing the pigment and a bowl for heating up the wax. Besides this there is the cauterium which is spoon-shaped at one end and flat, spatula-shaped at the other. There was also a glass vial presumably for holding small amounts of color in powder form. From this, as also several illustrations we have of the artist and his studio showing him at work, a fair description of the method can be projected.

Then again we come to an investigator, Count Caylus who, in 1749, attempted an interpretation of the Pliny passage. His method taken up by several contemporaneous French artists was quite simple. He rubbed beeswax on the canvas or panel designed to receive the picture. The next step was to take chalk and rub it over this so that the colors simply mixed with the water would adhere and not crawl on the waxed surface. When the painting is finished the panel is slowly brought toward the fire, the wax melts and binds the colors. The method is efficient and has its advantages. The colors have a richness not secured by oil and are locked up from the front and back against injurious vapors. Washing such a painting does not affect the colors in the least.

I am fortunate in possessing a book printed in London in 1760 which sets before the English artist the process of Count Caylus. The work is written by J. H. Müntz and differs somewhat from the method just described in that the canvas received its coating on the reverse side, the wax when melted penetrating through the canvas and binding the color.

He also states that when a tone is to be modified after the "burning in" process this can be done by a glaze. To prepare the now waxy surface it is rubbed with chalk so that the colors mixed with water only will adhere. When the colors have dried, the painting is again brought slowly to the fire to bind them. A charcoal fire is advised and also the precaution taken to recede

from it as slowly as it was approached so that the cooling is not too rapid.

It is natural that the wax will alter the tone of the color; hence in this book Müntz says to take a strip of canvas and after it is waxed, paint on it a stroke of all the colors and tints you intend to use. Then cut the strip in half from end to end. Expose one of these to the fire to bind the colors with the wax and then place the strips next to one another for comparison when painting.

A final chapter of the same book is devoted to the making of crayons in wax, an innovation of the writer. With these the picture is drawn and then "burnt in".

Both of the methods, that is the first of Count Caylus and the latter with crayons, can be applied to walls. In this, however, the heat is brought to the wall in the form of a portable charcoal brazier until the wax sweats which is an indication that the binding process is complete. As previously stated these permit of a slight polishing with a soft cloth.

The hope is expressed by Müntz that the great Reynolds would try the technique but I believe it did not find favor with him as none of his paintings is executed in wax.

The permanence of a pigment locked up in wax is undoubtedly greater than in some other medium, for wax resists acids and gases better than any other substance used as a binding medium. Its great protective, weather resisting qualities were recognized by the Greeks who used it on walls as also on statues to better preserve them against the action of the elements. Praxiteles perfected the ganosis, as the Greeks called this, and from descriptions of his work along this line a wax emulsion was used because it permitted of a much even application than molten wax.

We find Hippolyte Handrin executing a series of mural decorations in the St. Vincent de Paul in Paris; Schnorr decorating the walls of the Residenz in Munich; and Böcklin painting some panel pictures in the wax method. On the inspiration of L. P. Laurie, Robert Burns, A.R.S.A., carried out several works in the encaustic method in England.

In closing this month's article I express the hope that some one among the many readers of *THE AMERICAN ART STUDENT* will experiment with wax. It may find a field where its application is better suited than another technique and thus some one may reap benefit from the suggestions enumerated here. Inquiries will gladly be considered and references to articles bearing on the subject given.





## GENERAL MASSES OF THE FIGURE

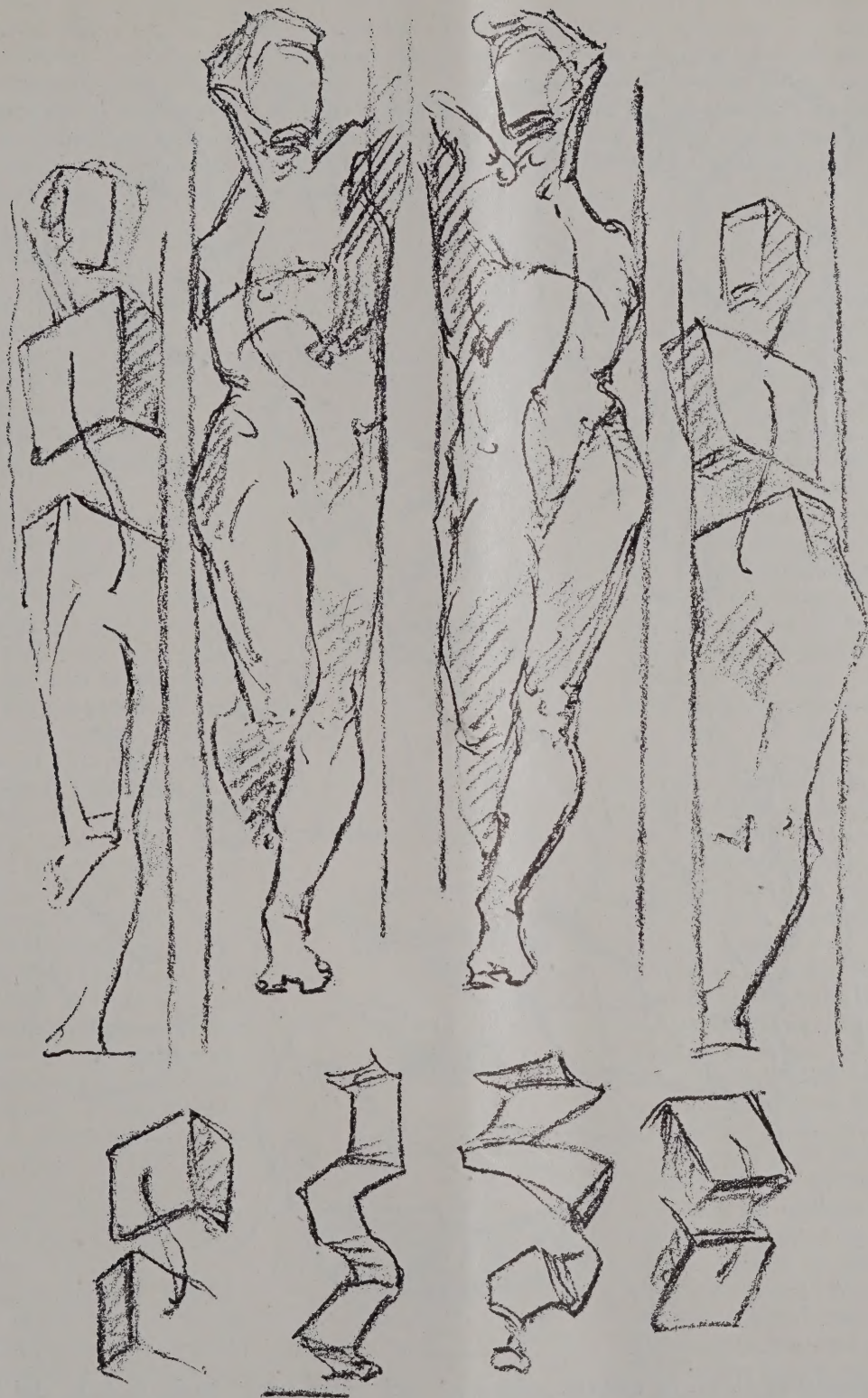
In less than 300 words of a chapter on masses and movements of the body, George B. Bridgman has generalized in a simple but comprehensive description, a subject which life class in-

*Page Eight*

structors find it difficult to make beginners comprehend.

Following is the text of the chapter referred to, which, together with the accompanying illustrations, has been selected from Mr. Bridgman's book, "Constructive Anatomy":





"The masses of the head, chest, and pelvis are unchanging.

"Whatever their surface form or markings, they are as masses to be conceived as blocks.

"The conception of the figure must begin with the thought of these blocks in their relation to each other. They are to be thought of first as one thinks of the body of the wasp, with only





one line connecting them, or without reference at all to connecting portions.

"Ideally, in reference to gravitation, these blocks would be balanced symmetrically over

*Page Ten*

each other. But rarely in fact, and in action never, is this the case. In their relations to each other they are limited to the three possible planes of movement. That is, they may be bent for-



ward and back in the sagittal plane, twisted in the horizontal plane, or tilted in the transverse plane. Almost invariably, in fact, all three movements are present, to different degrees.

"In these various movements, the limit is the limitation to movement of the spine. The spine is the structure that connects one part of the body with another. It is a strong column occu-

pying almost the center or axis of the body, of alternating discs of bone and very elastic cartilage. Each segment is a joint, whose lever extends backward to the long groove of the back. Such movement as the spine allows the muscles also allow, and are finally connected by the wedges or lines of the actual contour."

## KERAMIC DEPARTMENT

Edited by FRANZ NEUSCHAFER

*(This department has been created for amateur china painters because of the renewed interest that is being shown in Keramics. Readers are invited to send inquiries to the Keramic Editor, and the answers will be published here.)*

Simple pottery can be made in the home without the use of a potter's wheel, and if the directions given below are followed interesting bowls and vases can be made with very little labor. Potters' clay can be purchased for a few cents a pound at various art supply shops. It comes in the form of a fine powder, and must be mixed with water until of the proper consistency to shape and mold. Put equal amounts of the clay powder and water into a bucket and allow them to stand over night. Then knead or work thoroughly until a uniform mass is formed. Be sure all the air bubbles are worked out before the modeling is commenced. The longer the clay is kneaded the better will be your results in the finished product. If the clay is too moist work out some of the water. Some clays are very cohesive, and must have fine sand added to them in order to work them up properly.

To make a pottery bowl or vase we start first with the base. Take a piece of clay about the size of your fist. Work this clay until you have it hollow in the center and resembling a bird's nest in appearance. From this nest-shaped piece gradually work out the

shape of the base for the bowl or vase. It is well to make a rough drawing first of the shape desired, and follow the lines of the drawing when modeling the clay. On this base build the sides adding the clay in spiral pieces, and shaping the sides carefully with the fingers as each spiral coil is added. Keep the sides of a uniform thickness, and work the clay with the hands

until the desired shape is obtained. If the walls of a piece of pottery are allowed to become too thin in one place it may collapse during the process of making. If the clay is too moist the same difficulty will arise. Keep one hand inside the piece of pottery, and mold the shape with the other hand, smoothing and patting the clay until the sides are of uniform thickness and of the shape desired. If one must leave the work before the object is completed cover it with a damp cloth so that the clay will not dry out.

When the sides have been formed the base may be finished and scraped down until of the proper thickness and shape. When the sides and base are all smooth and uniform the pottery is ready to be decorated. Fig. 1 shows a tall vase which is decorated with a simple border. This vase was colored first, and the design formed by scraping off the color in the design area after the firing process. The coloring is done in several ways. The colors come in a powdered form, and a simple way of apply-

ing them to the pottery is to mix a little of the coloring with a solution of clay and

*(Continued on page 22)*

FIG. I

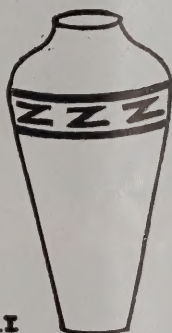


FIG. II



FIG. III







IN THE ARBOR

BY ANTOINETTE B. HERVEY



THE FLOWER GARDEN

BY CORNELIA F. WHITE





SUNSHINE

BY WILLIS HOOPS

## TEACHING TO MAKE PHOTOGRAPHS PICTURES

(The photographs accompanying this article are the work of students of Clarence H. White, and are reproduced here by arrangement with the Pictorial Photographers of America.)

By CLARENCE H. WHITE

An Interview with Walter L. Hervey, former President, Teachers' College

"Just what do you mean, Mr. White, by the 'professional spirit'?"

"I would say that the professional spirit is characterized by *sincerity* and *thoroughness*. A mere amateur dabbles—doesn't follow through—doesn't take pains. A mere commercial worker thinks in terms of quantity, speed, profits, rather than in terms of quality. One who has the professional spirit takes pains—infinite pains. He isn't satisfied with his negative or his print until he can say, 'That is as fine a thing as I can possibly make it.' He isn't content to use poor paper

or cheap processes. He is working for permanent satisfaction in his product—doing his best to make it a thing of beauty—something that will not fade out mechanically and that will not lose interest artistically, as time goes on. I would say that *sincere craftsmanship* is one of the chief characteristics of a professional photographer.

"I begin to see why your Alumni and students stand by the School and swear by it so. Isn't it because 'there is a reason'?"

"Well, the fact is that when you are working for feeling and spirit in your pictures, you are getting feeling and spirit in the people who make the pictures. Joy in work is one of the big things we are trying to get. And I will be perfectly frank in saying that we get it. Less than five per cent. of those who start in our work give it up. And there is hardly a day passes without some of our students or alumni telling me how much this work means to them. Some of them go so far as to say that what they have learned here is very precious to them, something





#### PLACING A PICTURE

BY LEO PORRAS

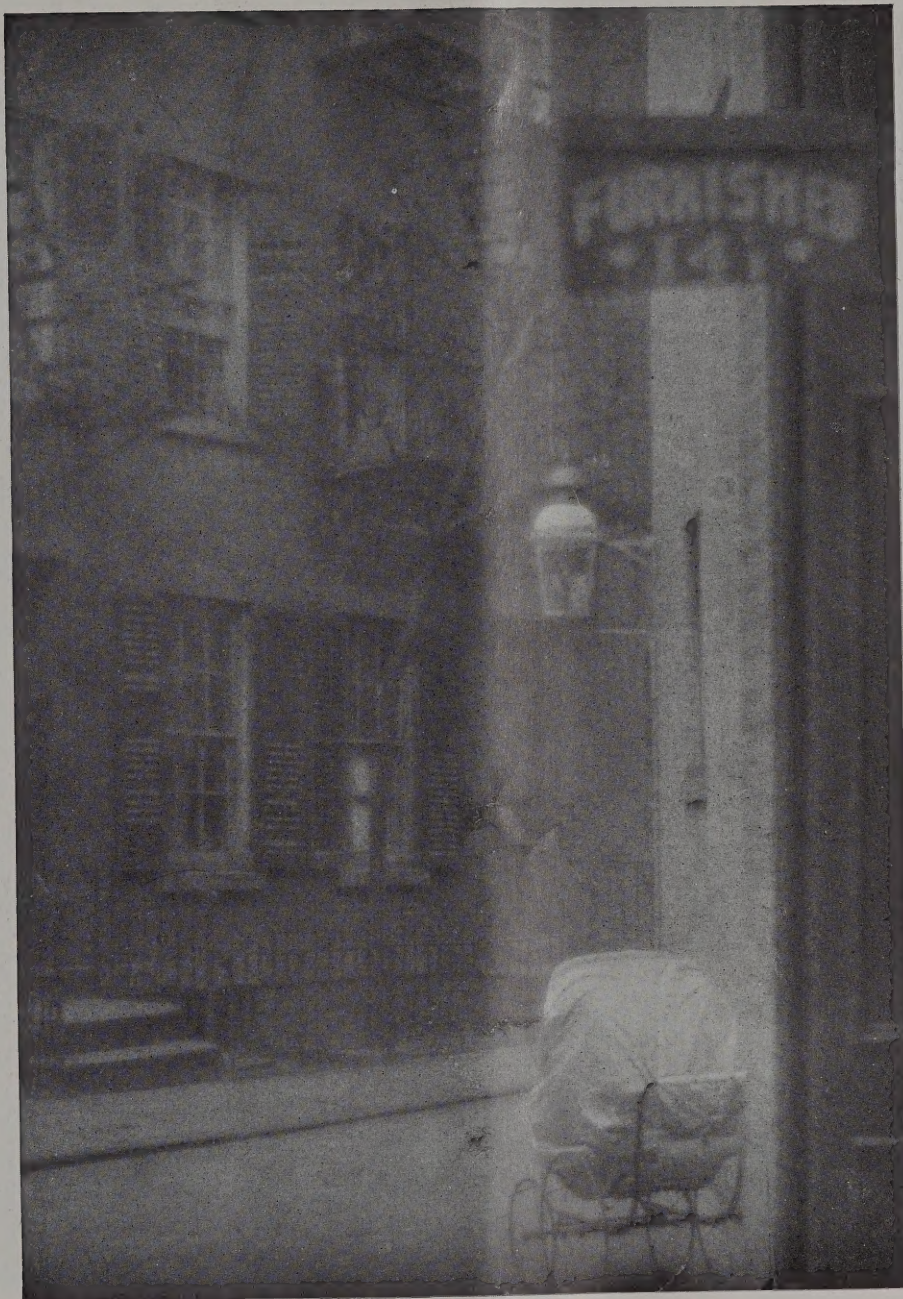
they wouldn't have missed, wouldn't part with, for anything."

"Can you indicate more definitely just what that 'something' is? I mean something technical, having to do particularly with pictorial photography."

"I can answer that in a single word—*structure*. Technically the work of the School is based on design. In one of the courses the history of art

is studied from the standpoint of design. There are courses in block printing, etc., which are essentially the application of the principles of design. The pupils are taught that no picture, no photograph, is a real work of art unless it is strong on the structural side. This applies to portraits as well as to landscapes, architecture, genre, posters, and moving pictures. In a good portrait the structure reinforces the representa-





CITY STREET

BY BLANCHE C. HUNGERFORD

tion. This is true of Rembrandt and Goya, for example, and we try to make it true of the work of our students. When they get this point they feel that they have begun to live in a new world, and their work takes on an interest it never had before.

"Does that answer your question?"

"It does, Mr. White, and I may as well tell you that that question was not a real question.

I knew the answer, because I am one of those who, after studying pictures for a good many years, and after tramping past a good many miles of Saint Sebastians and Susannas, found out from you, on this one point of *structure*, more than I had learned from everything and everybody else.

"One more question—and this will be a real one. Does pictorial photography pay? Do

Page Fifteen





A MOMENT'S REST

BY GERTRUDE BROWN

your people create beauty and starve, or is it a case of seeking first the kingdom of beauty and having *some* of 'these things added unto you'?"

"I would say that the case for pictorial photography as a means of making a living is looking up. Of course you can't make people over all at once, and it is too true that very many people do not know good work from bad,

and would prefer the bad if they did. But they are learning. There is a natural response to beauty.

"But aside from that, it must not be forgotten that photography is one of the things permanently in demand. People want their pictures taken. They want to have pictures of their

*Continued on Page 23*





"A STAINED GLASS WINDOW"

BY A. FLOEGEL

Yale School of the Fine Arts

## BEAUX ARTS INSTITUTE OF DESIGN

*Circulars of Information and Programs for the Exercises in composition in any of the following departments will be mailed on request by writing to 126 East 75th Street, New York.*

**DEPARTMENT OF SCULPTURE:** Awards made at the judgment of May 30, 1921.

*Jurors*—Messrs. J. E. Renier, John Gregory, John Flanagan, Salvatore Bilotti, Ernest W. Keyser, Edward McCartan, Arthur Crisp, Donn Barber.

*Monthly Exercise in Composition No. 9:* Subject, "An Ornamental Inkstand." Eight models submitted, all B.A.I.D. (No awards.)

*Life Modeling Classes:* Mr. Ulysses A. Ricci's Class—Second medal, F. C. Fischer; first mention, T. Mellilo; second mention, A. Block, P. G. Vagis. Mr. J. E. Renier's Class—First mention, T. Mellilo; second mention, A. Block, B. Piccirilli, H. Hensche. Mr. F. Lynn Jenkins' Class—First mention, P. Herzel, C. Parducci; second mention, H. Lindenmann, G. E. Tolentino.

*Architectural Ornament:* Mr. Charles G. Peters' Class in Louis XIV Ornament—Second medal, V. Mancini; first mention, C. M. Chamberlan, S. D'Angelo; second mention, S. Santore, C. Geraci, I. Crisafulli.

*Nature Study (Drawing):* Second mention, L. Barone, S. D'Angelo, J. Bonano, V. Mancini, L. Worswick.

**DEPARTMENT OF MURAL PAINTING:** Awards made at the judgment of May 31, 1921.

*Jurors*—Messrs. Allyn Cox, George Ennis, W. Dowling, Joseph Lauber.

*Monthly Exercise in Composition No. 9:* Subject, "A Stained Glass Window." Sixteen sketches submitted.

Second medal, A. Floegel, Yale School of Fine Arts. Second mention, H. P. Camden, School of Fine Arts, Crafts, etc., Boston. First mention, A. Abbot. First mention, H. Meiere, A. Floegel. Second mention, Portia Geach.

**DEPARTMENT OF INTERIOR DECORATION:** Awards made at the judgment of June 6, 1921.

*Jurors*—Messrs. J. M. Hewlett, H. O. Milliken, H. Greenley.

*Problem in Elements VI:* Subject, "Ceilings in Several Styles." Three designs submitted. Second mention, S. D. Laughlin, B.A.I.D. Atelier, T. Fuller, "Atelier", Denver.

*Projet VI:* Subject, "A Sea Captain's Clubroom." Three designs submitted, all B.A.I.D. Second mention, E. Johnson; mention, A. Frati.





EX LIBRIS

BY M. PETERSHAM

## AMERICA'S ART TRADITIONS

What are America's art traditions, and on what does her art thrive?

The standard art magazines carry mostly illustrations of old masters or antique furniture which are changing hands—or contemporary fine art of the most conservative movements.

For America, industrial art development is the immediate future. Traditions for this are found in the illustrations just spoken of together with material in books which have come to us showing the primitive peasant art and applied art of every corner of the globe rather than the work of the Peruvians or American Indian.

America's art tradition lies evidently in the traditions of every race and country just as her population comes from every clime. From these we have distilled the factors which we recognize as American. Will an individual character evolve in our industrial art?

"Applied Art", recently published by F. K. Ferenz of New York, which is getting to be commonly well known, shows the tendencies at work towards this Americanization by showing the sources and results of the transitions.

Page Eighteen



EX LIBRIS

BY M. FULLER

There are seventeen plates in three and four color process plates, and fifteen in manipulated two or five color copper half-tone, zinc line and Ben Day tints. The remainder are in black and white halftone and line or a combination of these printed in inks and on paper suitable to the subject. The highest grade heavy weight enameled, dull finished or antique stock has been used as each particular instance necessitated. The fifty plates and the special part with the articles are contained in a heavy portfolio with an appropriate cover design.

## GETTING READY FOR FALL

This is the time to plan at which art school you will study this fall. There was hardly a good school in the country that did not have a big waiting list last season. Whether or not this will be the case again this fall is not certain, but at any rate it is best to be assured of what course and what school you will attend this fall. THE AMERICAN ART STUDENT will try to assist students in the selection of schools, if they will tell us what branch of art they wish to follow, and in what cities they would prefer to study.



## MODERN COLOR For Fine and Applied Art

By MICHEL JACOBS, Director, Metropolitan School of Art

Many systems of studying color have been written and taught since time immemorial. Leonardo Da Vinci was perhaps the first who wrote on the effect of light on color. Then came men like Chevreul, Root, Hatt, Luckiesch, and numerous others. Some of these used in part the modern theory of light as demonstrated by Helmholtz and some using a law of light as demonstrated by Sir Isaac Newton, but none of these was able to coincide the law of transmitted light with the laws of pigments.

Sir Isaac Newton tells us that red, yellow and blue are the three primary colors and Helmholtz in later discoveries proves that the three primary colors are red, green and violet. The three colors of Sir Isaac Newton translated into pigments as sold by the colormen would have been Harrison red, yellow cadmium and cobalt blue. The Helmholtz colors in pigments would be French vermilion, emerald green and cobalt violet mixed with a little blue. By changing the Newton-Brewster triad and making it crimson, lemon chrome, and cobalt blue and arranging the six colors in a circle, the three spectrum primaries forming a triad one-third circle apart and the new pigmentary primaries as above placed between these colors, we will have a spectrum chart which will show the exact relationship of one color to another.

The reason we are anxious to know the places of the colors in the spectrum chart is so that we can find out what are the true complementaries of any color. In this new system of color, red (vermilion) is complementary to blue (cobalt); yellow (lemon-chrome) to violet (cobalt violet plus a little blue); green (emerald) to crimson (alizarin). The only test that is necessary to find a complementary is that if two colors when mixed together form a *perfect* neutral, they are complementary. This neutral must be a gray which has no color, the same as if we mixed a perfect black with white.

In this system we find that when three paints which are primaries are mixed together they form a black or dark gray. It makes no difference whether they are the spectrum primaries or the pigmentary primaries. When three colored lights, which are the primary, are reflected together on a white surface, the light will be white, so we see that the law of color is divided into the law of opposites as all things in nature,

the three primaries in light making white and the three paints making black. By this system there is but one law of color instead of the two.

This knowledge of the mixture of paints is very necessary to the artist in mixing his pigments. If he wishes to make a neutralized color he simply mixes a little of his complementary and he thereby lowers the brilliancy of that color and by adding white he will be able to produce any shade or tone. Whereas in the old method of using black, one is very apt to make what the artists call "mud" or "brown sauce". For it is well understood that there is no perfect black paint. If we use an ivory black in mixture with the blue paint we make a neutral green, not blue. If we mix this ivory black with blue-green we make a neutralized yellow-green and if we use another black, let us say jet black, with a red, we make a neutralized purple. It is very well for the house painter to use black to neutralize his colors for here he can use the color black which will be of the same color as his pigment, but for the artist to have black on his palette is the same as taking one medicine which will cure all ills. By the mixture of complementaries one can always be sure of pure silver grays for nature has no black in her composition.

Another reason we wish to know the exact place of all colors in the spectrum is to be able to paint the color of a shadow and to get the effect of light on color. The rule in this system is that the shadow of an object goes *toward* its complementary. Dividing the spectrum between the yellow and the orange all colors that are yellow, yellow-green, green, blue-green, blue and blue-violet go clockwise toward the complementary and all colors that are red, scarlet, crimson, purple, violet go counter clockwise toward their complementary. As an example let us take a red shirt. On the equator in brilliant sunlight the shadow of this red shirt would be perhaps a neutralized blue-violet. If this red shirt were brought to the north temperate zone in the sunlight the shadow would be a neutralized violet or purple. If this red shirt were seen in the shade the shadow would perhaps be no more than a neutralized crimson, and if this same shirt were brought indoors the shadow would only go as far as neutralized scarlet. Of course the effect of the light on the color on the lighted side changes according to the color of the light, and is sometimes more red or more orange, but our guide in regard to the shadow is based on the color of the pigment which appears at that particular moment to our eyes.



Still another object of knowing the exact placing of colors in the spectrum. In the combination of colors which are pleasing to the eyes it is necessary to know the juxtapositions and the harmonious placing of colors. All colors which are within half of the spectrum and adjacent to one another are in harmony. If we go more than half of the spectrum we are using the complementary of one of the colors making an uneven combination. We can also place two colors together which are complementary and when placed in juxtaposition they enhance their brilliancy. We can also put two colors and their two complementaries together, or 3s and 3s, 4s and 4s, or 5s and 5s. Another class of combinations we can use is: uneven complementaries, if the balance of color is in the center, for example: Three colors with one complementary, the middle color showing which is the color that will balance the others. Then three colors against two complementaries, using the color between the center and the ends would give us the correct color to find the complementaries. Then there are numbers of uneven combinations such as 3 and 5, 4 and 5, 6 and 1, etc. These combinations we know as split complementaries are most pleasing. It is not necessary to always paint these colors in brilliants. Many neutralized colors can be used as explained in the color mixing paragraph of this article. In using color in any of the arts or applied arts we must understand that all colors are made up of two rays of light and in order to get the most pleasing scintillation or vibration we must arrange to break up these colors into their components, for example, if we have an object which appears to us red in the sunlight we must break it up into its two component parts which are crimson and yellow. Or if an object appears to us emerald green we must break it up with yellow and blue and if an object appears to us as yellow it must be broken up into green and red (vermilion) the two colored rays forming yellow in the spectrum.

It will be noticed that two pigmentary primaries are the components of the spectrum primaries and two spectrum primaries are the components of the pigmentary primaries.

Whether one is painting a portrait, landscape or designing gowns or doing interior decoration or making a batik it is necessary to know the laws of light on color and the effect it has on the human eye. To attempt to give all the ramifications of color in this short article is impossible. In fact for one to understand color it is

necessary that they do certain exercises to train the eye to see correctly.

It is a source of gratification to the writer to see how quickly the student can grasp and understand color by this new system, whether they are already finished artists or mere beginners. In two months time any one can be made to see color correctly, but of course it must be understood that color alone does not make an artist, either in the fine or the applied arts. Some people are born colorists and need no instruction in the color art, but even these can be helped by knowing the effect of color without experimentation. As Millet said, "All knowledge is useful." We see many examples of applied art such as interior decoration, costume design, stage design and lighting and batik making; in fact all the arts and applied arts in which the color is either uninteresting, Bolsheviki, flamboyant, or vulgar combinations. Brilliant colors can be combined into something very beautiful and refined as well as the neutralized or grayed tones, depending on the individuality of the artist.

The applied arts today approach very nearly the fine arts, in fact many of our paintings are spoiled by the combinations used in the interior decoration or other objects in the home. To say that a thing pleases one means nothing for there is a right and a wrong in color combinations as there is a right and a wrong in all things in nature, and art is but nature seen through a personality, and personality is born of character and information plus observation.

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## COVER DESIGNS FROM STUDENTS

Scores of suggestions have poured into our offices as a result of our request for contributed cover designs,—the majority of them having one or more strikingly good points.

But in the main there has been an absence of knowledge as to what constitutes not only a pleasing, original subject, but an absence of knowing just how a cover design should be and is reproduced. We want to call the students' attention to the articles on reproduction and commercial art which have been and will appear from time to time in the columns of *THE AMERICAN ART STUDENT*; and urge those who are contributing covers to study the April, May, June and July issues of this year to get an idea of just about what is wanted.



Dozens of designs depicting an artist at work have come in through the mails,—some of them in yellow and black and in red and black combinations which cannot be photographed by the ordinary line cut process and have to be discarded as soon as they are seen. We are particularly anxious to be able to reproduce the work of students whose work has never before appeared in print.

## THE IMPRESSIONIST AND POST-IMPRESSIONIST LOAN EXHIBITION

Much space has been devoted in the columns of the New York newspapers to the radical departure which has been made by the trustees of the Metropolitan Museum of Art in presenting for the first time, a goodly sized exhibition of paintings of the impressionist and post-impressionist school. Personal opinions, expressed verbally at the preliminary showing, ran riot.

It was the critic writer's first opportunity to indulge in a bit of levity because of the unlooked-for liberality on the part of the managing board in presenting so thoroughly modernized an exhibition which will continue until the fifteenth of September. While all of the trustees could not agree that many of the works were really worthy of a place on the walls they were unanimous in their belief that this section of the country should have the chance to see and to judge for themselves. They deserve as much credit as do the twenty men and women who so kindly loaned the paintings which make up the exhibit, 126 in all.

The exhibition, in brief, shows how realism in art, which came to its full flower in impressionism, in which artists actually simulated the effects of atmosphere, caused a revulsion that led painters to discard the imitation of things and led them to the invention of arrangements of form and color through imagination and love of beauty.

Twenty-two artists are represented: Courbet, Manet, Monet, Pissarro, Seurat, Guillaumin, Renoir, Degas, Puvis, Toulouse-Lautrec, Redon, Gauguin, Van Gogh, Cezanne, Derain, Matisse, Picasso, Bonnard, Vuillard, Dufy, Vlaminck and Roualt.

The paintings by Degas, and twelve by Renoir who has reached a highly keyed stage of impressionism in his work, are especially worthy examples; but the generous response and inter-

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est shown by the public at large has demonstrated the fact that the efforts on behalf of the trustees have not been wasted. I would urge both student and finished artist to see the exhibition and to study it with an open mind, as should be done to all works of art. There is much that is good; there are some things that are poor.

For my own part I must accept John Ruskin as a guide and his belief that "The artist not only places the spectator but talks to him; makes him a sharer in his own strong feelings and quick thoughts; hurries him away in his own enthusiasm; guides him to all that is beautiful; snatches him from all that is base, and leaves him more than delighted,—ennobled and instructed, under the sense of having not only beheld a new scene, but of having held communion with a new mind, and having been endowed for a time with the keen perception of a nobler and more penetrating intelligence . . ." And his statement that "All really great pictures, therefore, exhibit the general habits of nature, manifested in some peculiar, rare and beautiful way."

A. R. R.

## KERAMIC DEPARTMENT

*(Continued from page 11)*

water which is of the consistency of thick cream. Cover the pottery with this colored solution spreading it evenly over the moist surface of the clay. Allow the color to become set, and the pottery to dry several days before the firing is done. The pottery may be left in a natural color and the design worked out in one or more colors on this background. The firing is done in a kiln such as that used for firing hand-painted china. If the vase is to hold water it must have an inside glaze. This is done by brushing red lead on the entire inside surface of the vase while the clay is moist and before the firing is done. If one desires glazed pottery, a glaze may be purchased and added to the color powder. The two are then dissolved in a solution of gum arabic and water, and applied to the pottery with a brush. One part of the color powder to ten parts of dry glaze will give good results. Two coats of this should be applied. Two firings are usually necessary when glaze is used.

Fig. 2 shows a bowl resting on a teak wood stand. The bowl was colored green, and the design carved in the moist clay with a small wooden tool which comes for this purpose. This piece of pottery was left unglazed, and fired as soon as the coloring and clay were dry.

Fig. 3 is a large jar copied after the Indian

pottery, and decorated with an Indian design. Leave the pottery the natural color, and work out the pattern in contrasting colors. The fine lines are carved in the clay with the wooden tool. All supplies for making pottery can be bought at an art supply shop or manufacturer of china colors, and one may have the firing done at any place having a kiln for hand-decorated china.

Advice regarding materials and colors desired for manufacture and decoration of pottery, china and glass, and names of the best sources of supply may be secured by writing to the Ceramic Editor of THE AMERICAN ART STUDENT.

Dear Editor:

I have been having less success with silver than with gold, as although I have applied it more heavily it seems to fire out thinly and requires several firings. Also, in my last firing I had trouble with the Carmine which instead of coming out a beautiful shade, fired unsatisfactorily.

A. Silver should be laid on much heavier than gold which is a metal less dense than the latter and in firing it partly volatilizes. As the unsatisfactory results in firing Carmine only occurred lately we believe that you may have been firing in the same kiln with the silver. Care must be exercised as silver when placed too near carmine in firing will injure the latter.

Q. It will be much appreciated if you will tell me how large surfaces are best grounded. My present results are not satisfactory and I fear I have not been properly instructed.

A. Grounding is best done by the use of best English Grounding Oil thinned with turpentine in which is mixed a little lamp black to give it a tint so that when laid on even application can easily be discerned by the eye. It should be laid on with a flat brush and then stippled with a pad of cotton covered with old silk. After the required evenness is thus obtained the color is dusted on.

## HINT FROM AN ART BUYER

"There are many artists who come to me every day with their portfolios and try to sell me work, or get orders to do work for me," a large buyer of commercial art work told me the other day. "There is a monotonous sameness about what most of these artists are attempting. A young lady came to me today with a portfolio of drawings that were skilful, but commonplace. 'Why do you not go in for shoe illustrating?' I suggested to her. 'I know of only one man in New York who can draw shoes, and this is one field of commercial art drawing which a skilful artist will not find crowded.'"



## TEACHING TO MAKE PHOTOGRAPHS PICTURES

(Continued from page 16)

friends. It is as necessary to have a child's picture taken as to get him a spring suit. Besides, people are more interested than one would suppose in photographs of landscapes, architecture, and so forth. And they are coming to appreciate and to demand a better kind of photography. A pictorialist may get from \$10 to \$100 a sitting, with orders that mount up to much more.

"Then there is the expansion of photography—a very wide subject, very interesting and suggestive to any one looking for a vocation. For instance, one of my students has just sold four photographs for magazine covers for \$150. Request come in every little while for photographs for commercial purposes, advertising, for example. The advertisers are waking up to the value to their business of photography of the right sort. They see that the better the photograph the more widely it can be used. Then there are the doctors. Did you ever notice how many doctors are interested in photography? Yet the photographers doing medical work in this city can be numbered on the fingers of one hand. The use of photography in surgery, in hospitals, is going ahead by leaps and bounds. One of the Alumni is engaged in this work. There are other new uses for photography, the greatest of all in the moving picture business—one of the three or four largest businesses in the country. In the beginning the chief man—the director—was a theatrical man, who knew nothing of photography, and who did not think in terms of pictorial effects. Now the director—or one director—must be trained in photography. Some of these directors are paid as much as the other kind. This is natural, for a moving picture is nothing but a series of still photographs,—still photographs projected so as to produce motion.

"There are many other facts that I might give, some of them out of the day's mail—any day's mail—but I haven't time and you haven't space to go into it all. There is no question but that photography—pictorial photography, at that—is very attractive as a vocation to one who will spend some time in training and who will work at it in the professional spirit."

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## OLEO TEMPERA EXHIBITION

The exhibition of posters and paintings in the Oleo Tempera exhibition, which was advertised in the last issue of THE AMERICAN ART STUDENT, drew a large daily attendance at the show rooms of A. Sartorius & Co., 57 Murray Street, New York, where the exhibition was held.

The accompanying illustration shows a painting made by DeNeale Morgan, of California, and was one of a number of paintings worked in Oleo



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Through the courtesy of A. Sartorius & Co., a number of these works will be exhibited in the artists' material section of R. H. Macy & Co., during the two weeks commencing July 5th. Here they may be viewed and examined by the many artists in New York, who will be very much interested in the effects.

## COLOR FOR AMERICAN CITIES

"The American city is flat and dull and drab, while the countryside is rich with color," says Phyllis Ackerman in the *New York Evening Globe*. This writer makes a moving appeal for livelier hues in the makeup of the American city. The great towns that have been built up in the United States, she declares, "are flat and colorless, with smudgy gray buildings, dull tan and gray rooms inside of the buildings, gray and brown clothes on the people, only dark blues, never reds or orange or gold.

"In Arizona we have orange cliffs against a cobalt sky. On the Massachusetts coast there are the clear blues and yellows and sharp greens and all across the continent there is color, endless gradations of gold and blue in the California hills, beautiful depths of purple and buff and green in the Rocky Mountains, the shimmering yellow of ripe corn over the plains, the flame of autumn trees in the eastern mountains.

"And yet the civilization that has been planted in this rich-toned country is drab and cold. The ordinary American is unaware of color. Most

Americans of taste are afraid of it in any personal choice.

"We are drab in spite of our colorful land because the civilization that we set here was a northern civilization put down with all of its traditions intact, almost without adjustment to the new and different environment. . . ."

"We have blurred the natural brilliance of our country with a dull smudge of thick brown and weak gray. When will we have the courage and integrity to live up to the possibilities of our landscapes and really live in our land of color?"

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Page Twenty-Six

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